

# Price collusion, rationalisation and Admiralty oversight in British shipbuilding: The case of the Warship Group, 1926–1945

The International Journal of  
Maritime History  
2021, Vol. 33(3) 561–576  
© The Author(s) 2021



Article reuse guidelines:  
sagepub.com/journals-permissions  
DOI: 10.1177/08438714211037692  
journals.sagepub.com/home/ijh



**Christopher W. Miller**   
**and Hugh Murphy**  
University of Glasgow, Scotland

## Abstract

Between 1925 and 1935, several private firms capable of constructing warships, or parts thereof, collapsed, merged or were partly or fully ‘sterilised’ against any return to shipbuilding during a period of ‘rationalisation’ to reduce perceived overcapacity relative to demand in British shipbuilding. Thereafter, rearmament had the opposite effect upon industry; lack of capacity in some key areas created almost unprecedented demand, and led eventually to uncontrolled price collusion and profits, particularly on warship contracts. An investigation into profiteering was undertaken in 1943, which embarrassed the remaining builders and their principal contractors. This article establishes that the Admiralty had allowed a form of price-fixing at taxpayers’ expense to proliferate for some time, a largely unknown episode that spanned the years of disarmament and rearmament. Further, it explains how and why collusion occurred when it did, and discusses the catalytic role of shipyard rationalisation. Finally, we conclude by suggesting reasons for such loose Admiralty control of warship costs during rearmament.

## Keywords

British admiralty, price collusion, private shipbuilding yards, rationalisation, Royal Navy

## Introduction

Consequent upon the Naval Defence Act of 1899, and the adoption of a ‘two-power standard’ by which the Royal Navy should match the naval strength of any two other

---

### Corresponding author:

Christopher W. Miller, Centre for Business History in Scotland, University of Glasgow, Scotland.  
Email: christopher.miller@glasgow.ac.uk

countries, private shipbuilders constructed an increasing number of warships for the Royal Navy.<sup>1</sup> In the escalating naval race with Germany, from 1909 to 1913 private firms launched 534,000 standard displacement tons (sdt) of warships for the domestic account.<sup>2</sup> Collectively, the major warship firms were mixed builders of warships and merchant ships, including passenger liners,<sup>3</sup> their market strategy based on the belief that a downturn in mercantile construction could be counterbalanced by an upsurge in demand for more profitable warship building, or *vice versa*. During the Great War, with competitive tendering abandoned and replaced by allocation of orders by the Admiralty, production became heavily skewed towards warship building. Accordingly, warship firms won highly profitable 'cost plus' contracts, which encouraged wasteful practices.<sup>4</sup>

In the aftermath of war, the Royal Navy's abandonment of the commitment to the 'two-power standard', treaty limitations, deflationary policies, economic nationalism elsewhere, and continuing austerity meant that large numbers of private shipbuilders engaged in warship work before and during the war were competing for a vastly reduced programme of naval construction. The impact of the Washington Naval Treaty of 1921 was immediate in that four battlecruiser orders were cancelled.<sup>5</sup> In 1922–1923, the value of warship construction work for the Admiralty plummeted from £11,816,000 to £721,000,<sup>6</sup> a situation not aided by a concomitant downturn in mercantile

1. H. Peebles, *Warshipbuilding on the Clyde: Naval Orders and the Prosperity of the Clyde Shipbuilding Industry, 1889–1939* (Edinburgh, 1987), 30. The immediate consequence of the Naval Defence Act was that private shipbuilders were awarded contracts in a five-year programme to build four battleships, five protected cruisers, 17 second-class cruisers, and six torpedo gun boats.
2. A. Slaven, *British Shipbuilding: A history, 1500–2010* (Lancaster, 2013), 63. Standard displacement tons is a measure of the weight of water a ship displaces when fully manned and equipped, including stores and ammunition, but excluding fuel and reserve feed water. The National Archives (hereafter TNA), Kew, London, UK, DNC Department Admiralty Records of Warship Construction During the War, 1914–1918. Peebles, *Warshipbuilding on the Clyde*, 74. In the distribution of Admiralty orders for warships from 1909 to 1914, Clyde firms were dominant and were contracted to build 77 ships of 325,606 sdt. Unless otherwise stated, subsequent tonnage figures are taken from *Lloyd's Register of Shipping Annual Summaries*.
3. TNA, CAB 102/538, L. Errington, Table of warship construction 1909–1913, divided by government and private yards.
4. For British shipbuilding in this period, see H. Murphy, 'The British Shipbuilding Industry during the Great War: A Contextual Overview Incorporating Standardization and the National Shipyards, 1916–1920', *International Journal of Maritime History*, 14 (2012), 19–63. Cost-plus contract paid the shipbuilder's costs of production plus a profit, with no attempt to reach a fixed price prior to, or during, production, or to limit the total amount of payment.
5. For this period, see, G. H. Bennett, *The Royal Navy in the Age of Austerity: Naval and Foreign Policy under Lloyd George* (London, 2016), chapter 7.
6. L. Johnman and H. Murphy, *British Shipbuilding and the State since 1918: A Political Economy of Decline* (Liverpool, 2002), 19.

demand when freight rates collapsed in 1920, leading to wage reductions and widespread unemployment in shipbuilding districts.<sup>7</sup>

Against this background, only 18,000 sdt of warships were launched in private yards during 1920, with no warships built by them over the next four years. This left the mixed builders in a severe bind as all had invested in expensive plant and equipment carrying huge overhead costs, which were now largely under-utilised. On the mercantile side, the industry had at least a temporary increase in demand through the passage of Trade Facilities legislation, which guaranteed loans to shipowners to order in UK shipyards, though the positive effects were limited.<sup>8</sup>

Although it was in the Admiralty's interest to keep the private warship and engine building firms in business, both for competitive tendering purposes and to preserve, for strategic reasons, as many firms as possible capable of building the most complex warships, such firms faced the twin forces of economic downturn and disarmament. In this especially perilous situation they were the first to 'seek shelter' from the gathering storm. Yet, despite the obvious perils and amidst myriad histories of interwar Britain, disarmament and rearmament, only scant attention has been paid to how the shipbuilding industry reacted to and dealt with such forces, and the effects of these upon the Admiralty (and thus Britain's) strategic interests. This article explains the process of 'seeking shelter', which led to sophisticated collusion between notionally competing firms, and demonstrates how and why it was allowed to evolve, and with what consequences (or indeed benefits). What follows is a chronological overview of price fixing for Admiralty contracts by private shipbuilders, the effects of 1930s rationalisation schemes, and the belated, though largely ineffectual, attempts at Admiralty oversight and scrutiny in light of clear evidence of profiteering prior to and during the Second World War.

## Warship builders' committee

The history of price fixing can be dated to tentative discussions in late 1925, which followed the collapse of small-scale Admiralty assistance schemes to builders (in

- 
7. L. Johnman and H. Murphy, 'An Overview of the Economic and Social Effects of the Interwar Depression on Clydeside Shipbuilding Communities', *International Journal of Maritime History*, 18 (2006), 231–2. In March 1921, the 29 shipbuilding firms on the Clyde employed 42,209 skilled men and apprentices. By 1923, employment had fallen by 51 per cent. That year, if labourers are included, 32,000 shipbuilding workers were unemployed on Clydeside.
  8. L. Johnman and H. Murphy, 'Subsidy and Treasury: The Trade Facilities Act and the UK Shipbuilding Industry in the 1920s', *Contemporary British History*, 22 (2008), 95, 102. The function of the Trade Facilities Act, which ran from November 1921 and was renewed annually until it ended in 1927, was to stimulate employment. The Act authorised the Treasury to guarantee the payment of interest and principal on loans to be applied for by shipowners. The aggregate capital guaranteed was not to exceed £25m. By May 1927, this figure had increased to £75m. Shipbuilding was the largest beneficiary of the Act and total guarantees to the industry amounted to £21,640,585, 29 per cent of the total. See also L. Jones, *Shipbuilding in Britain: Mainly between the Two World Wars* (Cardiff, 1957), 143–5.

the form of armour subsidies) and of firms themselves – the Coventry Ordnance Works being a notable casualty in that year.<sup>9</sup> In February 1926, at the Hotel Cecil in London, 15 private firms decided that co-operation was better than closure and a decision was taken to form a committee.<sup>10</sup> In that year, the last and only two battle-ships to be built before the rearmament period, HMS *Nelson* and HMS *Rodney*, were completed (at a loss) at Cammell Laird in Birkenhead and at Armstrong Whitworth on Tyneside, respectively.<sup>11</sup> At first, an unofficial destroyer rota was agreed between member firms, which would last until 1929. Each member firm was allocated a position in the rota by drawing lots, and a tendering price was agreed with a small level of profit. This allowed a more even spread of destroyer orders (which were not limited by Treaty obligations) among the member firms and avoided cutthroat competition.<sup>12</sup>

Whether the Admiralty knew, or had suspicions, of the group's existence in 1926 remains contentious.<sup>13</sup> No official investigation was undertaken to confirm or deny that a committee had been formed, while records are sparse, which was perhaps the intention all along as the group's deliberations were kept secret from the rest of the industry.<sup>14</sup> Such was the level of secrecy that member firms were given codenames.<sup>15</sup> As a comparator, the Admiralty could use its experience of previous contracts, prices and building times in the government-controlled Royal Dockyards, which had historically built destroyers, submarines and capital ships, to question profit rates in the private yards. As the main function of the Royal Dockyards was repair and

9. A. Slaven, 'A Shipyard in Depression. John Brown's of Clydebank, 1919–1938', *Business History*, 19 (1990), 200.
10. These were Clyde: Wm. Beardmore (Dalmuir), John Brown (Clydebank), Wm. Denny (Dumbarton), Fairfield (Govan), Scott (Greenock), Alexander Stephen (Linthouse), Yarrow, (Scotstoun). Tyne: Sir W. G. Armstrong Whitworth (Elswick and Walker on Tyne), Hawthorn Leslie (Hebburn), Palmers (Amble, Hebburn and Jarrow), Swan Hunter and Wigham Richardson (Wallsend). Elsewhere: Cammell Laird (Birkenhead), J. Samuel White (East Cowes, Isle of Wight), J. Thornycroft, (Woolston-Southampton), Vickers (Barrow in Furness).
11. British Parliamentary Papers (hereafter BPP) 1942–43, vol. 2, Public Accounts Committee (PAC) Navy Appropriation Account (1943), q.3244–3245.
12. Scottish Business Archive (hereafter SBA), University of Glasgow, Papers of Scott's Shipbuilding and Engineering Co. Ltd of Greenock; SBA, GD319/12/7/6, Meeting at Hotel Cecil. Hull and Machinery for Admiralty Contracts, 19 December 1926. Also cited in C. W. Miller, *Planning and Profits: British Naval Armaments and the Military Industrial Complex, 1918–1941* (Liverpool, 2018), 52.
13. Slaven, 'A Shipyard in Depression', 200, states that the rota was done with Admiralty assistance. Peebles, *Warshipbuilding on the Clyde*, 111, cites Slaven on this point. L. Johnman and H. Murphy, 'Welding and the Shipbuilding Industry: A Major Constraint?' in R. Harding, ed., *The Royal Navy, 1930–2000* (London, 2005), 101. Note that the existence of the committee was kept secret until February 1935, when it was officially disclosed.
14. What remains of the Warship Group records of this period can be found in fire-damaged records of Scott's Shipbuilding and Engineering Co., Ltd., papers in the GD319 classification: SBA, GD319/12/7/5–7. Scott's shipyard was bombed by the Luftwaffe in May 1941 and many records were destroyed.
15. SBA, GD319 12/7/7, Shipbuilder Codenames. Secret.

servicing, this was hardly ideal, as overhead and thus construction costs were typically far higher than in the private yards. It was also against a small, or at best, out of date sample size. Between 1936 and 1939, for example, the only warships built in the Royal Dockyards were cruisers, sloops and submarines, and no battleships had been built since 1918.<sup>16</sup> Moreover, the Admiralty's often substantial design changes in warships under construction in private yards were commonplace as rearmament progressed and often had significant cost implications. The net result was that making comparisons – even if so desired – was at least elastic, and at worst very difficult.

Regardless of knowledge or suspicion, what is not in question is that the committee became a secretive cartel, or in the argot of the period, a price fixing 'ring'.<sup>17</sup> By 1927, one member, the Tyne shipbuilder, Sir W. G. Armstrong Whitworth, had been brought down by an unwise investment in a Newfoundland paper mill, and with Bank of England assistance – the Bank reputedly lost £5m in debentures and nearly £500,000 in interest payments – it was merged with Vickers of Barrow-in-Furness as Vickers-Armstrong, with Vickers holding two thirds of the equity.<sup>18</sup>

Thereafter, the Warship Group, after the formation of the industry's trade association, the Shipbuilding Conference, in 1928, was intimately entwined with measures to limit the industry's capacity to bring it into line with anticipated demand, thereby improving overall profitability. This reached its apogee with the formation, with Bank of England assistance, of the industry's rationalisation vehicle, National Shipbuilders Security Ltd (NSS), in 1930. The objects of NSS were to assist the industry by purchasing redundant as well as obsolete shipyards, dismantling and disposal of their contents and the resale of sites under restriction (through covenants) against any further use for shipbuilding (sterilisation).<sup>19</sup>

## Dark years: The National Shipbuilders' Security scheme and its effects

NSS's first purchase was Wm. Beardmore's giant Dalmuir Naval Construction Yard, slated for closure in September 1930, for £209,000. The Bank of England had earlier

---

16. TNA, CAB 102/535, L. Errington, Naval New Construction Requirements, 1934–1939.

17. C. W. Miller, 'British Naval Armaments, Cartels and Defence Planning Between the World Wars', *Enterprise et Histoire*, 85 (2016), 70–87.

18. The Bank of England was intimately involved in industrial rationalisation in the interwar period. Its two rationalisation vehicles, Securities Management Trust Ltd, formed in November 1929, and Bankers Industrial Development Company Ltd, formed in April 1930, were active in industrial reorganisation measures, through mergers. The figure of £5m is cited in A. F. Lucas, 'The Bankers Industrial Development Company', *Harvard Business Review*, 11 (1930), 270–9.

19. NSS Memorandum of Association, 1930. For the NSS, see A. Slaven, 'Self Liquidation: The National Shipbuilders Security Company and British Shipbuilders in the 1930s', in S. Palmer and G. Williams, eds., *Chartered and Uncharted Waters: Proceedings of a Conference on the Study of Maritime History* (Greenwich, 1982), 125–41.

assisted in the restructuring of the Beardmore enterprises.<sup>20</sup> In a yard expressly built for warship construction, Beardmore had launched four battleships, seven cruisers, 21 destroyers, 13 submarines, six hospital ships and a seaplane carrier between 1906 and 1919. In the following decade, Beardmore had only built one cruiser and two submarines.<sup>21</sup> As one Warship Group member departed, a new member, another mixed builder, Harland & Wolff of Belfast and the Clyde, took its place in November, but not before being told to exercise discretion and absolute secrecy.<sup>22</sup>

By 1930, the industry as a whole had experienced a reduction of approximately 40 per cent in demand compared to 1913, with capacity increased by 20 per cent. Indeed, the all-time record launching figures of 2 million gross tons in 1920 was never again surpassed. Many mercantile-only yards had experienced very low volumes of work and suffered from a lack of investment. Tonnage under construction in 1929 reached 1,600,000 gross tons, yet half of available berths remained unoccupied. For most of the 1920s the industry operated at one-third of its capacity. Illustrating the issues facing builders, at the nadir of the industry's fortunes from 1930 to 1933 many yards closed altogether until demand picked up again. Some form of rationalisation was clearly necessary and urgent. Indeed, many yards closed for months or years, the record closure being Charles Connell's Scotstoun shipyard (non-Warship Group), which stayed closed for eight years from 1930. On the River Wear, average closures in mercantile-only firms lasted five years. Cammell Laird, a Warship Group member firm, closed from 1932 to 1934 and reopened when the Admiralty ordered a cruiser and two destroyers.<sup>23</sup> Another group member, Fairfield, was technically insolvent by June 1935 due to the collapse into receivership of a major passenger liner customer, Anchor Line, and was rescued by the Port Glasgow mercantile builder, and Chairman of NSS, Sir James Lithgow.<sup>24</sup>

NSS actions, under Lithgow's chairmanship, removed upwards of a third of the industry's capacity by 1938, mostly in the mercantile sector. This could be termed *faux* rationalisation, however, as it could hardly be seen as making the industry more efficient. Yet the elimination of excess competition meant that the volume of work in progress averaged around 50 per cent greater than had been shared among the original firms.<sup>25</sup> It is perhaps a

20. Miller, *Planning and Profits*, 73–4. For Beardmore, see I. Johnstone, *Beardmore Built: The Rise and Fall of a Clydeside Shipyard* (Clydebank, 1993), and for Beardmore's other industrial sectors, see J. R. Hume and M. S. Moss, *Beardmore: The History of a Scottish Industrial Giant* (London, 1979).

21. Johnman and Murphy, *British Shipbuilding and the State*, 36.

22. SBA, GD319/12/7/6, Memo from Crease to Brown, 29 October 1930. Also cited in Miller, *Planning and Profits*, 56.

23. Johnman and Murphy, 'An Overview of the Economic and Social Effects', 246.

24. Peebles, *Warshipbuilding on the Clyde*, 142–3.

25. Royal Museums Greenwich, National Maritime Museum, Caird Library, Shipbuilders and Repairers National Association Papers (hereafter NMM, SRNA), SRNA 4, Shipbuilding Conference General Meeting Reports, Minutes of AGM, 4 November 1937.

moot point, but had the NSS not existed it is more than likely, given the dire prospects of the industry as demand plummeted (a trend which was not meaningfully reversed until the second half of the 1930s), that many of the closures would have taken place in any event.

Illustrating this point, in the Warship Group the dismantling of Beardmore was far from the last of the reductions. In 1934, the large Palmers concerns on the Tyne (Jarrow and Hebburn) and Amble were sold for closure to NSS. These closures later sparked the (in)famous Jarrow Hunger March as unemployment in Jarrow among the insured workforce reached 73 per cent.<sup>26</sup> In Scotland, unemployment rates for the insured shipbuilding workforce reached 77 per cent in 1933, dropping to 54 per cent by 1935.<sup>27</sup> Against this background, Warship Group members, who had been operating as a ring for the best part of a decade, finally decided to reveal their existence, though only in confidence.<sup>28</sup>

### **Into the light: The Royal Commission and its aftermath**

When the Warship Group finally admitted its price collusion, it did not reveal it to the Admiralty. Rather, the admission came in a confidential memorandum advanced by Charles Craven, chairman of Vickers-Armstrong (he was knighted in 1942), to the Royal Commission on the Private Manufacture of and Trading in Arms, which began its investigation in February 1935 and completed it in October 1936. The Royal Commission had been convened under pressure from millions of peace activists who signed a mass petition to investigate the links between private profit in weapons manufacture and the fomentation of war, against a backdrop of rising Nazism, Fascism and a global lean towards autarky.

Vickers, as the Commission found, had already participated in profiteering and highlighted its relationship with the Electric Boat Company of Groton, Connecticut. This was based on an agreement to regulate the use of Electric Boat patents in submarine construction, which provided for payment of 40 per cent of profits from submarines built by Vickers at Barrow-in-Furness to the American firm. Unsurprisingly, this led to allegations of price manipulation, which were difficult to explain away, but remained unproven. The Commission, though deciding that the abolition of private manufacture of arms and the substitution of a state monopoly was perhaps practicable, was nevertheless, undesirable. This was at least in part due to the continuing darkening geopolitical landscape, which somewhat ironically had convinced much of the same public that speedy rearmament rather than uni- or multi-lateral disarmament was needed. Government, which had no

---

26. E. Wilkinson, *The Town that was Murdered: The Life Story of Jarrow* (London, 1939), 146.

27. *The Labour Gazette*, 1933–1935, various unemployment tables.

28. Johnman and Murphy, 'Welding and the Shipbuilding Industry', 101. SBA, GD319 12/1/6, Memo from Captain T. E. Crease, Acting Chairman Shipbuilding Conference and Representative of the Warship Group, 18 July 1940.



real appetite for the Commission in the first place, gratefully accepted the Commission's conclusions.<sup>29</sup>

Why the Warship Group should want to reveal its existence to a Commission notionally set up to look for wrongdoing in private industry's armaments deals, is unclear. This is partly due to the paucity of records; aside from Craven's memo, and some opaque statements made by the Cabinet Secretary Maurice Hankey during deliberations, little else survives. Likely, it was motivated not by guilt but by a desire to forestall a full-scale investigation into the activities of the Warship Group and its individual members. The embarrassing, but strategically useful, disclosure of Vickers relationship with Electric Boat by Craven was a case in point. The Warship Group's memorandum contained an admission that it had regulated both the distribution of warships and prices, and in an appendix, it explained the reasons for its formation, as well as that of the NSS, providing evidence that the two were – by 1935 at least – linked.

Despite the belated admission, neither direct reference nor adverse comment on the memorandum was included in the body of the Royal Commission's report, and its appendix was unpublished. Presumably, senior figures in government or in the Civil Service would have been informed of the Warship Group's admission to the Commission, and therefore the Admiralty would have been accordingly informed. Yet, even this is unclear. What evidence remains suggests that the Admiralty did know of the Group's existence consequent to the Commission's Report as its representatives thereafter met with the Group regularly. Nonetheless, by and large, they remained unaware or at least ignorant of the extent of the Warship Group's collusion on prices and distribution of orders. It would be quite wrong, however, to think of the Admiralty in monolithic terms here. It is exceedingly unlikely, for example, that elements within the Admiralty, including those in closest contact with shipyards (such as the Royal Corps of Naval Constructors), were blissfully and even shockingly unaware of what was going on. However, there is little doubt – and on one or two occasions even hinted at in Committee of Imperial Defence (CID) memoranda of firms 'operating rings' – that there were at least strong suspicions that collusion on prices was ongoing. This said, chronology is important, for such memos and hints only gathered pace from 1937 as the Second World War approached, and only really gained momentum from 1940 onwards.<sup>30</sup>

Another motive for disclosure is that the Warship Group firms, with their principals holding close and direct links to the Admiralty, and through company Board members who had previously held senior positions in the Royal Navy, had anticipated that a bonanza of full order books and profits was imminent as Britain belatedly rearmed, though rearmament was only scheduled to begin in earnest upon the expiry of the

---

29. Royal Commission on the Private Manufacture of and Trading in Arms, 1935–1936, Report, Cmd 5292, (London, 1936), 58, and Chapter 12, para. 3. Statement relating to the Report of the Royal Commission on the Private Manufacture of and Trading in Arms, Cmd 5451 (London, 1937). L. Johnman and H. Murphy, *Scott Lithgow, Déjà vu All over Again: The Rise and Fall of a Shipbuilding Company* (Liverpool, 2005), 22.

30. TNA, CAB 102/281, William Hornby, Shipbuilding and Admiralty Production-Preliminary Draft.



Washington and London Naval Treaty limits in December 1936. Though these plans had by necessity to be kept secret, not only from potential enemies, but also to avoid what would now be termed 'insider information' leaking to potential suppliers, and thus inviting share price speculation, it is clear some firms had something of a head start on the rest. Although the Principal Supply Officers Committee (PSOC), the organ of the CID responsible for supply planning through the rearmament phase, undertook deliberations in conditions of great secrecy, some information found its way to industry months before rearmament became 'public' knowledge, in particular the work on 'shadow factories', intended to boost armament production in the event of war by pulling in new suppliers from outside the traditional group of military contractors.<sup>31</sup>

Pertaining to PSOC, three civilian members who had served the country during the First World War in senior positions in government, served on an Advisory Panel of Industrialists from October 1933: Sir James Lithgow, Lord Weir of the Cathcart, Glasgow-based engineers, G & J Weir and the Sheffield steel maker, Sir Arthur Balfour.<sup>32</sup> Of the three, Weir was convinced from the outset that munitions (a critical bottleneck in 1915) were crucial, and that a small group of firms should be selected in peacetime; moreover, he recommended that 'approaches should only be made to the big firms and the big men'. Weir, Lithgow and Balfour evidently belonged to that category.<sup>33</sup>

This attempt to preserve capacity, not simply in the conventional matter of shells and ammunition, can be seen through Lithgow's later purchase of the Warship Group member, Fairfield, in 1935. During the initial phase of NSS liquidations, the Governor of the Bank of England, Montagu Norman had felt the company was too important to liquidate and had conceived attempts to ensure its survival, at least in the short term. Fairfield was, prior to the sale to Lithgow, registered in London as a result of its earlier takeover by the ill-starred Sperling Combine controlled speculative venture, the Northumberland Shipbuilding Co. Ltd of Howden on Tyne.<sup>34</sup>

The Bank of England through its Securities Management Trust had offered £200,000 to keep Fairfield in business, on the proviso that NSS would buy the firm at a later stage if Fairfield defaulted on the loan.<sup>35</sup> NSS had earlier 'sterilised' Fairfield's West yard in

31. Miller, *Planning and Profits*, 110–3.

32. Lithgow served as Director of Merchant Construction at the Admiralty from 1917 on his return from active service in France. Weir was Director of Munitions (Scotland) in Lloyd George's Ministry of Munitions, and Balfour served on the Advisory Committee on War Munitions and the Industry Advisory Committee to the Treasury.

33. SBA, DC35/31 CID, PSOC, Co-operation with Industry, note of a meeting on 3 December 1933, cited in Johnman and Murphy, *Scott Lithgow*, 58–9.

34. For Northumberland, see S. Diaper, 'The Sperling Combine and the Shipbuilding Industry: Merchant Banking and Industrial Finance in the 1920s', in J. J. van Helten and Y. Cassis, eds., *Capitalism in a Mature Economy: Financial Institutions, Capital Exports and British Industry, 1870–1939* (Aldershot, 1990), 71–94; and H. Murphy, 'An Anatomy of Speculative Failure: William Doxford & Sons Ltd, Sunderland and the Northumberland Shipbuilding Company of Howdon on Tyne, 1919–1945', *The Mariner's Mirror*, 104 (2018), 58–72.

35. London, Bank of England Archive, SMT/3/282, Memo from Montagu Norman to Andrew Duncan, 9 June 1933.

March 1934, through restrictive covenants barring any return to shipbuilding in that yard. In all this, through his involvement in advising rearmament planning in the CID, it remains speculative as to whether Lithgow saved Fairfield for his shipbuilding empire in the full knowledge that rearmament was imminent. In any event, instead of NSS following through with plans to sterilise the entire company after the eventual default in 1935, Lithgow stepped in as owner and chairman. By this point, however, rearmament was not exactly on the horizon for all to see, but a White Paper on Defence had been published in March 1935, which finally announced the National Government's decision to increase defence spending, and the first step to reverse a trend stemming back to the 1920s.<sup>36</sup>

### Rearmament, war and reining in profits

Rearmament, unsurprisingly, proved highly profitable for Warship Group firms, particularly on the Clyde, which had the largest concentration of composite firms.<sup>37</sup> The onset of war saved the bulk of the shipbuilding industry, particularly the mercantile-only firms. From January 1940, with warship building having priority, as in the Great War, shipbuilders were at the heart of Admiralty organisation of war production.<sup>38</sup> Sir James Lithgow was appointed Controller of Merchant Shipbuilding and Repair on the proviso that the Admiralty would interfere as little as possible in the normal methods of carrying on the industry and treat it with maximum goodwill.<sup>39</sup> Lithgow had quite a job on his hands - some of it his own making - particularly on the mercantile side of the industry, which had been denuded of investment during the interwar period and lost one-third of its capacity during his tenure as chairman of NSS.

For both the Admiralty and the shipbuilders, it was better to deal with the devil they knew, rather than the nascent Ministry of Shipping, but as war progressed parliamentary scrutiny over the Admiralty increased as the published accounts of some shipbuilding firms showed high profits. We know much of what transpired through a Public Accounts Committee (PAC) investigation of 1943 into the Navy Appropriation Account, which questioned the Admiralty's lack of scrutiny on warship contracts with

36. Statement Relating to Defence, March 1935, Cmd. 4827 (London, 1935).

37. Johnman and Murphy, *Scott Lithgow*, 23–4. Taking one Warship Group member as an example, Scott's Shipbuilding and Engineering Co. Ltd., of Greenock, a medium size private limited liability firm, which did not have to publish its accounts – on the back of two destroyer and one cruiser contract in 1934–1935 the firm declared a dividend for the first time since 1926. At the year-end 31 December 1939, due to naval contracts, a total of £455,000 had been added to the firm's reserves. Peebles, *Warshipbuilding on the Clyde*, 151. All mixed builders on Clydeside returned to profit by 1939.

38. TNA, CAB 102/527, D. McKenna, Naval Construction Programmes and their execution, 1935–1945.

39. Johnman and Murphy, *British Shipbuilding and the State*, 60–1. Lithgow's deputy was Amos Ayre of the Burntisland Shipbuilding Company, Fife, while Lawrie Edwards of Middle Docks, Tyneside, whose father George held a similar position in the Great War, was responsible for Ship Repair.

private shipbuilders, with the Director of Naval Construction (DNC), Sir Stanley Goodall, being heavily criticised.

The Admiralty, in times when competitive tendering prevailed, sought from its technical branches a certificate that tender prices were 'fair and reasonable', but such certificates were based on State-owned and managed Royal Dockyard comparisons.<sup>40</sup> The Admiralty's technical branches continued to arrange fixed prices with this flawed methodology, which was applied to a Group whose members did not compete with one another before the outbreak of war. In tandem with published profits, the close nature of price tenders made by Warship Group firms for hull and machinery contracts raised further suspicions of collusion. For example, for the King George V class of battleships, of which five were completed by different Warship Group member firms,<sup>41</sup> single tenders (hull and machinery only) for the first two contracts differed by only £6,000 against a contract price of over £3,500,000, while the lowest tender for those of the subsequent 1937 programme was only £13,000 above the higher of these. Similarly, for Dido class cruisers of the 1938 programme, nine tenders covered a range of only £18,475. As Ashworth noted, as a result of this the Admiralty now acted on the assumption that there was direct price collusion.<sup>42</sup>

Very little was done about this state of affairs until well after war on Germany was declared. In the same way that the Royal Commission's findings were summarily ignored in October 1936, partly if not wholly due to the alarming state of European international relations by that point, the inertia in 1937–1938 reflected the pressing issues already facing British naval rearmament, with a shortage of skilled labour, gun-mounting pits, armour production and other bottlenecks that necessitated refurbishment and expansion of yards, causing delays to anticipated timescales. Additionally, the increase in disputes over pay and conditions among the available pool of skilled labour was a constant source of fear within the PSOC.<sup>43</sup>

The outcomes of the first two challenges to the Warship Group by the Admiralty were different. In the former, the first measure was to proceed by single tender in ordering warships when the Admiralty required that ships be completed early for operational reasons, and to check by new methods if tender prices were reasonable. Regarding the second challenge, in 1940 a scheme was proposed by the Admiralty to determine the actual costs of private shipbuilders as a guide to fix subsequent prices. By May, however,

40. TNA, CAB 102/542, J. M. Embery, Shipyards and Shipbuilding including Royal Dockyards.

41. HMS *King George V* (Vickers-Armstrong, Tyne), October 1940. HMS *Prince of Wales* (Cammell Laird, Birkenhead), January 1941. HMS *Duke of York* (John Brown, Clydebank), August 1941. HMS *Anson* (Swan Hunter and Wigham Richardson, Wallsend), April 1942, and HMS *Howe* (Fairfield, Govan), June 1942. TNA, 102/536, L. Errington, Naval New Construction Requirements, September 1939–December 1941, Final Draft.

42. Ashworth, *Contracts and Finance* (London, 1953), 106–7.

43. C. W. Miller, 'Forward to Obscurity? Another Dimension to the Decline of the Radical Left on 1930s Clydeside', *Scottish Labour History*, 47 (2012), 91–109. Cambridge, Churchill College Archives, Records of Lord Weir of Eastwood, Box 17, 20<sup>th</sup> Meeting of Sub-committee on Defence Policy and Requirements, 7 May 1936.

this arrangement was deferred until January 1941, in part due to the National Government implementing a rise in a new Excess Profits Tax (EPT) to 100 per cent. By January 1941, however, it was considered that EPT was not on its own adequate to divorce close supervision of prices. Thus, the Admiralty decided to approve an earlier proposal to post-cost typical warships, but not to amend previously agreed prices, and to find details of actual costs to fix subsequent prices.<sup>44</sup>

Predictably, any investigation into their true costs alarmed the Group, which expressed to the Admiralty their strong disapproval. Consequently, after some movement in Group settlements, some 22 firms agreed to an investigation covering 32 warships with a combined value of over £20m. Of these, 27 had been ordered between 1936 and 1939 and the remainder placed shortly afterwards. In the later PAC investigation, the true extent of excessive profit rates was eventually brought to light, including profit rates for submarines of over 70 per cent, and 42 per cent for a battleship. For the 32 orders, the median profit rate stood at 28 per cent. On a sample of 21 warship contracts for hull and machinery, 14 had profit rates over 30 per cent and of that number, five were over 50 per cent, one of which was over 80 per cent.<sup>45</sup> These profit rates prompted a PAC member to caustically note that the DNC, Sir Stanley Goodall, had been wiped out as an expert on costings, to which Sir Stanley replied: 'Only in the matter of submarines.'<sup>46</sup>

In his diary, Goodall wrote in an entry of 28 October 1943: 'Public Accts report out. I get in the neck.'<sup>47</sup> Goodall, to his credit, expected criticism. At an earlier session of the PAC on 9 June, he got 'badly mauled' on submarines and on the King George V battleship contracts and knew that he was vulnerable over submarines. The Labour Party Member of Parliament for Chesterfield, George Benson (who had been imprisoned as a conscientious objector in the Great War), put some 130 searching questions to Goodall, who 'got in no counter attack against Benson and unsurprisingly came away from the session depressed'.<sup>48</sup> On submarines, for example, Warship Group members such as Vickers-Armstrong could discover Royal Dockyard prices published in the annual Navy Estimates to Parliament and pitch their tenders accordingly lower and still make a huge profit over their costs. Moreover, unlike private shipbuilders, the Royal Dockyards did not charge a profit margin as they were state owned.

Faced with this weight of evidence the warship firms could not but agree that they had made excess profits and offered to waive claims for 'extras' on all warships ordered from January 1939. They failed to persuade the Admiralty to accept their own figures,

44. Ashworth, *Contracts and Finance*, 107–8. TNA, CAB 102/203, J. L. Thorne, Admiralty Contracts, 1945.

45. BPP, PAC Report 1943, para, 12.

46. BPP, PAC Minutes of Evidence, Navy Appropriation Account, 9 June 1943, 4066.

47. I. Buxton, 'Some Snippets from Sir Stanley Goodall's Diary, 1943, 1944, 1945', *Warships*, 200 (2020), 23. British Library Manuscripts Division, Sir Stanley Goodall Papers, Add. Mss. 527859, Diary 1943. The DNC's official chronological correspondence and reports are held in TNA, ADM 229.

48. Buxton, 'Some Snippets, Goodall's Diary, 1943', 20. PAC, Minutes of Evidence Navy Appropriation Account, 9 June 1943.

eventually agreeing to waive claims amounting to £2.25m on 169 warships, including three aircraft carriers, three battleships, 14 cruisers, 40 destroyers and 41 submarines.<sup>49</sup>

After 1941, fixed prices for warships were abandoned. The Admiralty no longer requested tenders but paid shipbuilders their costs (confirmed by Admiralty accountants) plus a profit margin, and for two years prices were settled only for the smaller warships built. During the 1941 costs investigation it transpired that tenders included a hidden amount to cover the costs of a 1939 levy payable to the Shipbuilding Conference by its member firms, including the Warship Group, which replaced three earlier levies supposedly to increase efficiency and to provide modest funding to aid the industry against foreign competition.<sup>50</sup> The levy was applicable to all contracts. With this knowledge the Admiralty claimed the right to a refund on all future State contracts, warship and merchant, and near the end of 1945 the Shipbuilding Conference, in final settlement paid the Admiralty £365,000 for the period 1941–1944.<sup>51</sup>

The nature of the relationship between the Admiralty and the Warship Group changed from 1941, and some semblance of scrutiny returned for costs tendered in warship contracts. From this point, the Admiralty placed greater reliance on actual costs based on as recent a date as possible provided through the Shipbuilding Conference and preferred group settlements for classes of warships rather than separate agreements with individual firms. Average costs per ship of the same class were calculated across the group. A rate of profit around 7.5 per cent was negotiated with builders and added to the average cost paid for each ship in the group. Prior to the war, the Admiralty had no official access to shipbuilders' books, but assumed such powers from 1939 to get a better idea on costs. If investigations showed estimates on the cost of completion were too high the firm in question had to refund the excess, and if too low (however unlikely this may be) had to simply bear the loss. In addition, and for the first time, the Group was mandated to supply an overall profit certificate outlining the profit made on each settlement as a whole.<sup>52</sup>

Though increasing profits had attracted greater scrutiny from 1941, the Admiralty could draw few comparisons in warships with Royal Dockyard costs as a yardstick to confirm whether contracts were fair and reasonable (though escalating private costs against even the rough comparator of Dockyard overheads told a significant part of the story). The Admiralty, further, overestimated the anticipated cost increases between contract signing and eventual delivery some years later, which were often reflected in the tender price, and the overhead rates of shipbuilders that had reduced

---

49. Ashworth, *Contracts and Finance*, 109.

50. On foreign competition, the levy made little difference as the Shipbuilding Conference confidentially admitted to the Board of Trade in 1938 that the industry could no longer compete with continental competition for reasons including high cost levels. H. Murphy, 'No Longer Competitive with Continental Shipbuilders: British Shipbuilding and International Competition, 1930–1960', *International Journal of Maritime History*, 25 (2013), 44.

51. Ashworth, *Contracts and Finance*, 112.

52. For a fuller discussion of the period 1941 to 1945 and commentary on contract negotiations making full use of PAC and Comptroller and Auditor General reports, see Ashworth, *Contracts and Finance*, 108–13.

per ship-built owing to full order books as rearmament progressed. The net result was to keep the illusion, largely through poor calculation on the part of the Admiralty, of 'reasonable' tenders, for progressively lower actual costs as overheads were fully utilised and labour was scarcely idle and thus profits grew even after 1941 as there was obviously a long time-lag in agreeing contract settlements for warships began years before. As the PAC Report's authors concluded, knowledge of the Admiralty's technical departments of shipbuilding costs in the private yards had proven to be 'gravely inadequate'.<sup>53</sup>

## Conclusions

How, why and when private firms formed a ring in order to fix prices and how this ring worked influenced warship procurement practice for the Royal Navy. Though initially informal, the backdrop of the mid-1920s and the paucity of other assistance drove firms together and therefore undermined substantially any process of competition between firms, even when stability and profits returned and when *faux* rationalisation had ended. Though undoubtedly crucial in preventing cutthroat competition, serving (whether knowingly or otherwise) the Admiralty's and the Warship Group's interest at the time it continued for at least a decade than was necessary or defensible.

The second explanation regards the process, or lack thereof, of oversight by the Admiralty of its longstanding partners in warship construction. It might seem incredible that subsequent to the confidential memorandum sent to the Royal Commission in 1935–1936 the Admiralty, the department of state responsible for the shipbuilding industry, would continue to be unaware that the Warship Group existed as a price fixing cartel. And yet, the evidence of ever-increasing profits and only belated oversight to bring these under control, is clear. Nonetheless, the Admiralty did become increasingly suspicious that a ring existed, especially given that there was remarkably little difference in tender prices during competitive tendering exercises, particularly as rearmament took hold from 1936 to the early phase of the Second World War. However, the Admiralty was remarkably content to satisfy itself that comparing warship firms' prices with Royal Dockyard costs provided a reasonable point of comparison and thus offered protection against excessive profiteering from the former. This rationale was deeply flawed and given the excessive rates of profit made by warship firms, could be seen as a dereliction of fiduciary duty to taxpayers.

There probably also was an element of wilful ignorance, especially given the desirability, at least in the late 1920s and early 1930s, of retaining a core of warship firms in business as a hedge against future rearmament. The NSS liquidations had shown, after all, that while there was (usually) dozens if not hundreds of idle berths free in the late 1920s and early 1930s, the role of warship builders with specialist facilities for complex naval orders provided a special case requiring special attention, particularly from 1933 as international tensions flared. It was, however, highly convenient for the surviving Warship Group firms that NSS helped to remove competition by reducing the total number of shipyards specialising in warship construction, leaving the remaining firms in

---

53. Buxton, 'Some Snippets, Goodall's Diary, 1943', 33.



a far better position to financially exploit rearmament as it took hold. A combination of fewer facilities and national exigency combined to trump more detailed scrutiny of tenders, and to lead planners to conclude that given the pressing nature of the challenges faced, the quicker Britain re-armed, and the fewer barriers erected, the better.<sup>54</sup>

Indeed, the Warship Group knowingly acted as a ring to boost its profits at the expense of the taxpayer. No criminal sanctions under common law or existing regulations materialised, though the Group operated in what could only be described as a lax anti-trust environment. It was only in 1948, however, that Attlee's Labour Government introduced the Monopolies and Restrictive Practices (Inquiry and Control) Act, which established a Monopolies Commission. However, nationalised undertakings and trade unions were exempt.<sup>55</sup>

When the evidence mounted against the Warship Group, exemplified in the PAC Report of 1943, some financial redress to taxpayers accrued, but profits had already been disbursed to shareholders through dividends, which were particularly high in the publicly quoted firms that had many institutional shareholders in the City of London. In a sense, everyone but the general taxpaying public, who would expect their governments and departments of state to look after their collective interests, benefitted. The Warship Group survived, later made excessive profits, the Admiralty obtained their warships, private investors and city institutions banked their dividends, and Britain and its allies won the war.

As the war ended, the outlook for warship firms was once again gloomy as the naval new construction programme for 1945 was reduced to an absolute minimum consisting only of two escort vessels, one submarine, two surveying ships, six small floating docks and some miscellaneous small craft. Only one battleship, *Vanguard*, was laid down at John Brown Clydebank on 8 October 1941, and what would become the last battleship built for the Royal Navy was nearing completion.<sup>56</sup> Her long build time was largely due to shortages of skilled labour, and she was finally commissioned on 12 May 1946. By VE Day, 727 vessels had been cancelled from fleet carriers downwards, whose total costs had they been completed, was estimated at £158 million, of which £32.5 million was already spent or was a liability under break clause conditions, giving a net saving of £125.5 million.<sup>57</sup>

The larger mixed firms could now switch their endeavours to cost-plus mercantile construction in the temporary absence of two pre-war competitors, Germany and Japan. By the first quarter of 1947, the volume of tonnage in hand was the largest since 1922 in the easy conditions of a sellers' market for the British shipbuilding industry, which lasted to 1958. For the Warship Group of firms, however, in an atomic age, the years of plenty in naval construction soon turned to famine, and the nascent air travel industry after 1960 fatally undermined any hopes that passenger liners would make up the shortfall in the

---

54. R. A. C. Parker, 'British Rearmament 1936–1939: Treasury, Trade Unions and Skilled Labour', *The English Historical Review*, 96 (1981), 306–43.

55. 11 & 12 Geo VI, 1948.

56. House of Commons Debates, vol. 420, 7 March 1946, Navy Estimates, Statement by the First Lord of the Admiralty, A.V. Alexander (hereafter HC Debates Navy Estimates), cols. 544–5.

57. HC Debates Navy Estimates, col. 544.



longer term. By the end of the 1940s, the long and irreversible process towards fundamental rationalisation of the warship sector of the British shipbuilding industry was underway.<sup>58</sup>

### Acknowledgements

We thank the anonymous referees for their helpful comments and suggestions, some of which we have incorporated in the text. Christopher Miller also wishes to acknowledge the role of the University of Jyväskylä's department of history and ethnography, and particularly Professor Jari Ojala, for a fellowship in 2020 which aided immeasurably in the writing of this article.

### Declaration of conflicting interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

### Funding

The author(s) received no financial support for the research, authorship and/or publication of this article.

### ORCID iD

Christopher W. Miller  <https://orcid.org/0000-0003-4161-4482>

### Author biographies

Christopher Miller holds postgraduate degrees from the University of Oxford (Balliol College), and the University of Glasgow, where he is currently a lecturer within the School of Social and Political Sciences, and a member of the Centre for Business History in Scotland.

Hugh Murphy is an Honorary Professor of Business History in the Centre for Business History in Scotland, University of Glasgow, and Visiting Reader in Maritime History, National Maritime Museum, Royal Museums, Greenwich. His latest monograph is *Shipbuilding in the United Kingdom: A History of the British Shipbuilders Corporation* (Routledge, 2021).

---

58. For this period and later, see, L. Johnman and H. Murphy, 'The Rationalisation of Warship Building in the United Kingdom, 1945–2000', *The Journal of Strategic Studies*, 24 (2001), 107–27.